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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,861

08/16/2006

Christian Furst

4385-052760

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EXAMINER

HEINCER, LIAM J

ART UNIT

PAPER NUMBER

1796

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/550,861	<b>Applicant(s)</b> FURST ET AL.	
	<b>Examiner</b> Liam J. Heincer	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/2008</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The accompanying translations of the priority documents have overcome the intervening reference, Van Benthem et al. (US 7,199,209).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 32, 40, and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Considering Claims 32, 40, and 41: Claims 32, 40, and 41 are rejected under 35 U.S.C. 112 because the disclosed invention is inoperative and therefore lacks utility. Claim 32 claims that the amount of the reaction product is from about 5 to 95 weight percent of the amount of the reaction product. Claims 40 and 41 claim narrower weight percent ranges. This is a mathematical impossibility as any number divided by itself will always be 1, or 100%. For the purpose of further examination, the claims are being interpreted as referring to the solids content of the solution as suggested in the written description.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19, 23-32, and 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albrecht et al. (US Pat. 5,891,983) in view of Skoultchi et al. (US Pat. 4,770,668).

Considering Claim 19, 23, and 24: Albrecht et al. teaches a formaldehyde free condensation product between an aminotriazine and glyoxylic acid (2:25-33).

Albrecht et al. does not teach using an ester derivative of glyoxylic acid. However, Skoultchi et al. teaches using a hemiacetal of a glyoxalic ester (4:58-65) in an cyclic amine condensation product (2:12-42). Skoultchi et al. additionally teaches glyoxylic methyl ester methyl hemiacetal as being the preferred species (5:31-38). Albrecht et al. and Skoultchi et al. are analogous art as they are concerned with the same field of endeavor, namely condensation products of cyclic amines and glyoxylic acid derivatives. It would have been obvious to a person having ordinary skill in the art at the time of invention to have used they glyoxalic ester of Skoultchi et al. in the condensation product of Albrecht et al., and the motivation to do so would have been, as Skoultchi et al. suggests, the hemiacetal can be used in a wider pH range than glyoxylic acid (4:58-65).

Considering Claims 20-22: Albrecht et al. does not teach an alkyl group between the oxo group and the carboxylic acid group. However, the claimed compound is a homolog of the prior art compound. A person having ordinary skill in the art at the time of invention would have an expectation that the compounds of similar chemical structure would have similar properties. Therefore, a person having ordinary skill in the art at the time of invention would have found it obvious to have used the claimed oxocarboxylic acid based on the structurally similar disclosed compound. See MPEP § 2144.09.

Considering Claim 25: Albrecht et al. teaches the ratio of the triazine to glyoxylic acid as being from 0.5 to 6 (3:24-27). Albrecht et al. also teaches an embodiment with the glyoxylic acid being used in a molar ratio of 2.208:1 with respect to the triazine (Example 8).

Considering Claims 26, 27, and 39: Albrecht et al. teaches the reaction as occurring in an aqueous solution with pH of 3 to 7 (3:31-34).

Considering Claim 28: The Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. the solubility would inherently be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Considering Claims 29-31: Albrecht et al. teaches reacting the condensation product with an amino compound/amidation following the condensation reaction (3:31-40).

Considering Claims 32, 40, and 41: Albrecht et al. teaches solutions with solids contents of between ~35 and ~40 (Examples).

Considering Claims 37 and 38: Albrecht et al. teaches the triazine as being melamine (2:55-57).

Claims 33-36, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albrecht et al. (US Pat. 5,891,983) in view of Skoultchi et al. (US Pat. 4,770,668).

Considering Claim 33: Albrecht et al. teaches a process for producing a formaldehyde free condensation product between an aminotriazine and glyoxylic acid (2:25-33).

Albrecht et al. does not teach using an ester derivative of glyoxylic acid. However, Skoultchi et al. teaches using a hemiacetal of a glyoxalic ester (4:58-65) in an cyclic amine condensation product (2:12-42). Skoultchi et al. additionally teaches glyoxylic methyl ester methyl hemiacetal as being the preferred species (5:31-38). Albrecht et al. and Skoultchi et al. are analogous art as they are concerned with the same field of endeavor, namely condensation products of cyclic amines and glyoxylic acid derivatives. It would have been obvious to a person having ordinary skill in the art at the time of invention to have used the glyoxalic ester of Skoultchi et al. in the

condensation product of Albrecht et al., and the motivation to do so would have been, as Skoultchi et al. suggests, the hemiacetal can be used in a wider pH range than glyoxylic acid (4:58-65).

Considering Claims 34 and 43: Albrecht et al. teaches reacting the condensation product with an amino compound/amidation following the condensation reaction (3:31-40).

Considering Claims 35 and 36: Albrecht et al. teaches distilling off the water/drying the product (3:52-57).

Considering Claim 42: Albrecht et al. teaches the triazine as being melamine (2:55-57).

### ***Double Patenting***

Applicant is advised that should claim 37 be found allowable, claim 38 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claim 37 and Claim 38 both claim the reaction product of melamine and an oxocarboxylic acid derivative.

### ***Response to Arguments***

Applicant's arguments with respect to claims 19-39 have been considered but are moot in view of the new ground(s) of rejection. The amendment to the claims adding the limitation "formaldehyde free" required the removal of Parekh et al. (US Pat. 4,404,332) as formaldehyde is required in the invention of Parekh et al.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo, Ph.D./  
Supervisory Patent Examiner, Art Unit 1796  
18-Aug-08

LJH  
July 31, 2008